Kalya Courts, Fort Portal
16th–17th July 2014

Saving Mothers, Giving Life

Uganda, Phase I Dissemination Report

Executive Summary

During 16–17 July 2014, stakeholders of the Saving Mothers, Giving Life (SMGL) project met to discuss results and experiences from Phase 1 (June 2012–May 2013) from the learning districts of Kabarole, Kamwenge, Kibaale, and Kyenjojo in Uganda. Attendees of the meeting included the following: representatives from the Ugandan Ministry of Health (MoH); district leaders; district health officers; health workers at the facilities; funding partners—Centers for Disease Control and Prevention (CDC), US Agency for International Development (USAID), Merck for Mothers, ELMA Foundation—CDC and USAID-supported implementing partners; professional medical associations; United Nations Children Fund (UNICEF); journalists; and representatives from the new districts for which SMGL is expanding in Phase 2.

Day 1 presentations provided highlights of the following: the newly released MoH Reproductive Maternal Neonatal and Child Health (RMNCH) Sharpened Plan; the United Nations model ("One UN") for reducing maternal mortality; the SMGL Phase 1 results; SMGL external evaluation results; district presentations; and priorities for the SMGL Phase 2 on the basis of lessons learned in Phase 1. On Day 2, the districts presented their draft SMGL Phase 2 implementation plans.

Key SMGL achievements included the following:

- Recruitment of a critical cadre of health workers.
- Training and mentorship of health workers.
- Infrastructural improvements and upgrading facilities to provide emergency obstetric and neonatal care.
- Providing supplies and equipment.
- Strengthening transportation, referral, and communication networks.
- Providing transportation vouchers.
- Building mothers shelters.
- Organizing community mobilization with more than 4,000 VHT members trained, media campaigns, and caller user groups.
- Improved monitoring and evaluation systems, and coordination and partnerships at the district level.

Key results included

- A remarkable increase of 62% in deliveries that occurred in facilities.
- Better access to and availability of basic and comprehensive emergency obstetric and newborn care services (BEmONC and CEmONC) for complicated deliveries, including better access to obstetric surgeries, as shown by the significant increase in C-section rate to 6.5% of all births.
- Quality of care improvements in facilities that led to a significant reduction of 25% in the direct obstetric case fatality rate.
- An impressive decrease in the district-wide maternal mortality ratio (MMR) by 30%, including significant decreases in MMR caused by obstetric hemorrhage, postpartum sepsis, and obstructed labor and uterine rupture.
- Significant decreases in the MMRs caused by delays in seeking care, delays in accessing care, and delays in receiving care.

Lessons learned from the districts included

1. Functional health facilities and community mobilization improved MCH service use.
2. VHTs are key to community surveillance, community mobilization, and increasing community ownership.
3. Strong engagement and coordination of stakeholders in all program issues was vital for improved service delivery and program outcomes.
4. Strengthening the lower level facilities decongested higher level facilities.
5. Continuous mentorships improved quality of service delivered.
6. Health worker motivation improved retention and service delivery.
7. Functional ambulance systems and functional referral facilities improved access to CEmONC services and saved maternal and neonatal lives. In addition, these systems and facilities served to support blood collection and distribution.
8. The comprehensive health systems strengthening approach of SMGL was effective.

District plans used lessons learned from Phase 1 and focused on how to continue the momentum and improve sustainability in Phase 2. Plans included maintaining equipment, vehicles, referral system, and infrastructure; motivating VHTs; continuing mentorship, training, and supportive supervision; improving human resources recruitment; providing transportation vouchers; strengthening monitoring and evaluation tools and use of data; and conducting quality improvement initiatives. These activities will be a collaborative effort among the Ministry of Health, district leaders and implementing partners with a focus on increasing the Government of Uganda's ownership and sustainability. Areas to build on SMGL for Phase 2 include improving male involvement and focusing on neonatal care and family planning.

Table of Contents

INTRODUCTION

Every day, approximately 800 women worldwide die of preventable causes related to pregnancy[1]. In 2013, an estimated 289,000 women died during pregnancy, childbirth, or the postpartum period; 99% of these deaths occurred in developing countries, and more than half of them occurred in sub-Saharan Africa[1]. In Uganda, approximately 6,000 maternal deaths occur annually, translating into an estimated national maternal mortality ratio (MMR) of 438 per 100,000 live births. Hemorrhage and sepsis account for nearly half of maternal deaths in Uganda, with increasing numbers of maternal deaths associated with HIV/AIDS infection[2]. There is strong evidence that most maternal deaths in developing countries can be prevented if all pregnant women are offered timely access to Emergency Obstetric and Neonatal Care services (EmONC)[3,4]. EmONC consists of lifesaving interventions, including administration of parenteral antibiotics and anticonvulsants, uterotonic drugs, manual removal of placenta, removal of retained products of conception, assisted vaginal delivery by application of vacuum or forceps, neonatal resuscitation, blood transfusion, and caesarean section[5].

To progress toward achieving Millennium Development Goal (MDG) 5, the US government, through its Global Health Initiative (GHI), A Promise Renewed campaign (APR), and its post-MDG Maternal Health Vision, supports high-impact interventions to eliminate preventable maternal and child deaths in 25 high-priority countries. The Saving Mothers, Giving Life (SMGL) initiative aimed to accelerate the rate of maternal mortality reduction, with a goal of reducing the maternal mortality ratio by up to 50% in SMGL districts in 1 year. During Phase 1 (June 2012–May 2013), a health-strengthening model was developed, implemented, and evaluated in eight districts, four in Zambia and four in Uganda. The Ugandan Ministry of Health (MoH) identified four learning districts where the SMGL health-strengthening model was implemented during Phase 1 to garner experience and gather evidence on feasibility, effectiveness, and cost. Kabarole, Kibaale, Kamwenge, and Kyenjojo districts were selected because of the strong leadership and commitment of the local district governments to reduce maternal and newborn deaths, and their perceived ability to build on the President's Emergency Plan for AIDS Relief (PEPFAR) and maternal and child health (MCH) platforms. In these contiguous districts, mothers are referred to a regional referral hospital.

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[1] Maternal mortality fact sheet N° 348: WHO May 2014. Available at: http://www.who.int/mediacentre/factsheets/fs348/en/ accessed July 2014

[2] Uganda Bureau of Statistics (UBOS) and ICF International Inc. 2012. *Uganda Demographic and Health Survey 2011.* Kampala, Uganda: UBOS and Calverton, Maryland: ICF International Inc.

[3] Paxton A, Maine D, Freedman L, Fry D, Lobis S: **The evidence of emergency obstetric care.** *Int J Gynecol Obstet* 2005, **88:**181-193.

[4] Campbell OM, Graham WE: **Strategies for reducing maternal mortality: getting on with what works.** *Lancet* 2006, **368**(9543)**:**1284-1299

[5] WHO, UNICEF, UNFPA and AMDD: *Monitoring emergency obstetric care: a handbook*. Geneva: World Health Organisation; 2009.

During this pilot phase, the Government of Uganda (GoU) increased its political and financial commitments to maternal and child health. The GoU recruited more than 8,000 health workers to fill more than 90% of the vacant positions of critical cadres (i.e., medical officers, clinical officers, nurses, and midwives) at Health Centers (HC) III and HC II nationwide.

The MoH convened a regional SMGL Phase 1 results dissemination and Phase 2 planning meeting during 16th and 17th July, 2014, at Kalya Courts, Kabarole district. Associate Professor Anthony Mbonye, Commissioner Community Health Services, representing the Director General of Health Services of the MoH, officiated the meeting. The meeting was attended by 120 participants from the MoH, development partners (CDC, USAID, UNICEF, Merck for Mothers, and ELMA), implementing partners, professional medical associations, and district leadership from learning and scale-up districts.

1.1 Aim

The meeting intended to disseminate SMGL Phase 1 results and launch Phase 2 to the districts.

1.2 Objectives

1. Disseminate SMGL Phase 1 results to MoH, district leadership, development partners, and implementing partners.
2. Provide an overview of the Reproductive Maternal Neonatal and Child Health (RMNCH) Sharpened Plan.
3. Share lessons learned from Phase 1.
4. Develop district Implementation Plans for SMGL Phase 2.

1.3 Agenda

The 2-day meeting included a short opening ceremony, presentation of MoH policy, and dissemination of SMGL implementation and evaluation results. Small working group discussions were held to draw district implementation plans for Phase 2. District implementation plans were completed and presented on Day 2. The complete meeting agenda is presented in Appendix A of this report.

1.4 Opening remarks from the Chairperson Local Council V (LCV) Kabarole district

The Chairperson LCV, Mr. Richard Rabuhinga, welcomed all the participants to this meeting. He stressed the importance of the SMGL program in the districts. He noted some of the achievements of the program, including

- Improved access to antenatal care.
- Increased number of deliveries occurring in health facilities.
- Increased number of deliveries attended by a skilled care provider.
- Enrollment and expansion of staff.

"I want to believe that the second phase will build on the good achievements of the first phase… I am optimistic that we will get even better results at the conclusion of the second phase." LCV chairman

1.5 Key remarks from Dr. Roxana De Sole Rogers, USAID Acting Director HIV/AIDS, Health and Education

Dr. Roxana De Sole Rogers contextualized the issue of maternal mortality globally and in sub-Saharan Africa as "one of the greatest development challenges." She also called for a recommitment of all governments, development partners, and communities to address this challenge.

"At the Washington office of USAID, there are early discussions surrounding the impact of SMGL, as well as sustainability and replicability of the project. Impact has been achieved but work is needed to make it sustainable and replicable."

1.6 Key remarks by Associate Professor Anthony Mbonye on behalf of the Director General of Health Services of the MoH

The Director General has

- Appreciated the 30% reduction in MMR within 1 year despite initial widespread skepticism about the ambitious SMGL target.
- Commended the SMGL model used—a health system strengthening approach that focused on the 24-hour period around birth to reduce maternal deaths from preventable causes.
- Supported a strong focus on newborn care and family planning in the next phase.
- Acknowledged the efforts of the community, health workers, implementing partners, and the US government.
- Emphasized that Phase 2 should address gaps identified in Phase 1 to improve planning and implementation.
- Wanted the meeting participants to be aware that the MoH had launched the RMNCH Sharpened Plan in November 2013, which aimed to increase access to family planning and reduce preventable maternal, neonatal, and child deaths.
- Informed the meeting participants that the Speaker of Parliament had launched a campaign to prevent teenage pregnancy and called on districts and partners to support the efforts.

SUMMARY OF PRESENTATIONS

2.1 Overview of Ministry of Health Plan and National Priorities

Dr. Jesca Nsungwa, Assistant Commissioner for Child Health, presented the summary of the Sharpened Plan. The plan is aligned with national priorities and focuses on advocacy, resource mobilization, and prioritization of high-impact interventions to accelerate progress toward achieving MDGs 4 and 5. The plan's goal is to reduce socioeconomic and regional/geographic disparities in maternal health indicators.

The plan intends to

- Increase access and use of family planning.
- End preventable maternal deaths.
- End preventable newborn deaths.

The plan has five strategic priorities:

1. Focus geographically to prioritize high-burden districts.
2. Focus on high-burden populations.
3. Invest in high-impact solutions.
4. Promote education, empowerment, economy, and environment.
5. Enforce mutual accountability.

SMGL was recognized as a model initiative that successfully demonstrated progress toward ending preventable maternal and newborn deaths and advanced the districts' efforts toward achieving MDGs 4 and 5.

Proposed recommendations for information and accountability include the following: monitoring the results by using core indicators and a score card; digital health innovation; tracking of financial indicators, comprehensive reporting; and national accountability mechanisms.

The Assistant Commissioner emphasized the need to align and streamline all interventions for effective leverage and better use of resources in Phase 2.

2.2 One UN Model: Reducing Maternal Mortality

Ms. Susan Nyakoojo from UNICEF presented the "One UN" model. Maternal, neonatal, and child health was identified as one of the three UN convergence areas in October 2013. The model aims at eliminating duplication of services provided by the UN agencies in Uganda. It will be implemented in 11 districts (Gulu, Kitgum, Yumbe, Arua, and all 7 districts that constitute Karamoja region). The priority interventions of the model include the following:

- Improve access to and use of family planning.
    - Implement behavior change interventions to encourage birth spacing and breast-feeding.
    - Support door-to-door sensitization on family planning.
- Increase access to MNCH services (i.e., antenatal, delivery, postnatal, neonatal, and EmONC).
    - Community mapping and outreach to mobilize pregnant women to seek ANC.
    - Support functionality of health facilities in providing EmONC services, including utilities (e.g., water, electricity, solar systems) and EmONC training.
    - Support maternity waiting homes in northern Uganda.
- Establish and implement a voucher referral scheme that is linked with an education component about care for needy and hard-to-reach populations.
- Strengthen maternal and perinatal death review structures at district and health facility levels.
- Integrate nutrition services at all MNH service points.
- Carry out a campaign to prevent teenage pregnancy.

- Cross-cutting areas include the following: strengthening data collection mechanisms (i.e., Health Management Information System [HMIS]); supporting effectiveness and efficiency through implementation of the existing accountability framework for MNCH based on the scorecard; resource mobilization; and advocacy.

2.3 SMGL Phase I Results

Dr. Frank Kaharuza from Makerere University School of Public Health presented the SMGL model, the key interventions implemented, and the overall and district specific Phase 1 results (Appendix B).

The SMGL model

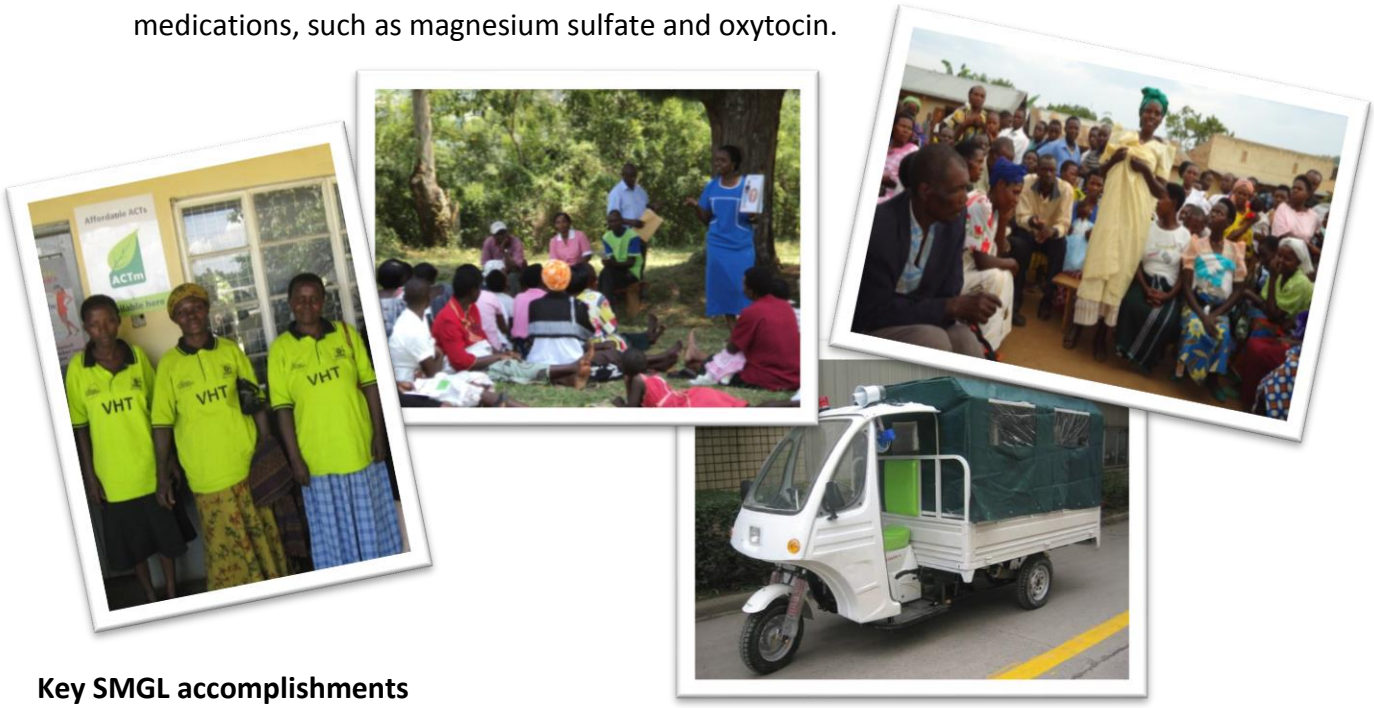
- Centers on the critical period of labor, delivery, and 48 hours postpartum.
- Uses evidence-based approaches to comprehensively address the *3 Delays* through district health system strengthening.
- Aims for aggressive, measurable, sustainable effects on maternal and newborn mortality and Prevention of Maternal to Child Transmission of HIV.
- Employs rigorous monitoring and evaluation (M&E), including prospective enumeration of deaths.
- Builds on national plans and leverages existing platforms.

SMGL Model Centered on Reducing the 3 Delays
Increase Awareness and Seeking Care for Safe Delivery
• Training of Village Health Teams to encourage birth preparedness and increase demand for facility-based delivery care.
• Community outreach activities to counsel women, families, local leaders, and community organizations about the importance of birth planning, recognition of danger signs of pregnancy complications, attending at least 4 antenatal care visits, facility delivery care, HIV testing and treatment, postpartum home care for mother or newborn and postpartum family planning.
• Distribution of Mama Kits to incentivize facility-based births.
• Community mobilization messages (e.g., radio, billboards, newspaper articles) and drama skits.
• Promotion of demand- and supply-side financial incentives to facilitate women seeking, accessing, and using quality care services (e.g., transport and delivery care vouchers, user-fee reductions, and conditional cash transfers).
Increase access to quality health care services

• Upgrade a sufficient number of public and private facilities with appropriate geographical positioning to provide—24 hours per day, 7 days a week—clean and safe normal delivery services, quality HIV testing, counseling and treatment (for woman, partner, and baby, as appropriate), and essential newborn care for all pregnant women in the district.
• Ensure that a minimum of 5 emergency obstetric and newborn care (EmONC) facilities (public and private), including at least 1 facility that can provide comprehensive EmONC per 500,000 population are providing the recommended life-saving obstetric interventions 24 hours per day, 7 days a week.
• Hire a sufficient number* of skilled birth attendants to provide consistent, quality, respectful, normal delivery care, diagnosis and stabilization of complications, and if needed, timely facilitated referral for EmONC. Performance-based EmONC-trained personnel in facilities that provide basic and comprehensive EmONC.
• Create a 24-hour, 7 day per week, consultative, protocol-driven, quality-assured, integrated (public and private) communication/transportation referral system that ensures women with complications reach emergency services within 2 hours. This includes providing, where appropriate, temporary lodging in maternity waiting homes for women with high-risk pregnancies or who live more than 2 hours travel time to an EmONC facility.
Improve quality, appropriateness, and respectfulness of care
• Strengthen supply chains for essential supplies and medicines.
• Train health professionals in emergency obstetric care, including obstetric surgeries.
• Ensure mentoring of newly hired personnel and supported supervision.
• Strengthen maternal mortality surveillance among communities and facilities, including timely, no-fault, medical death reviews performed in follow-up to every institutional maternal death, with cause of death information used for ongoing monitoring and quality improvement.
• Introduce sound managerial practices using ‘short-loop’ data feedback and response to ensure reliable delivery of quality essential and emergency maternal and newborn care.
• Promote a government-owned HMIS data-gathering system that accurately records every birth, obstetric and newborn complication and treatment provided, and birth outcomes at public and private facilities in the district. Where appropriate, m-health approaches to facilitate the monitoring activities.
*WHO guidelines recommend 1 midwife per 120 deliveries/year; 1-2 doctors and 6 medical personnel (midwives, clinical officers, and nurses) for every 1,000 births.

The key SMGL interventions were district-wide health systems strengthening—

- Human resources: 196 health workers recruited, 291 health workers trained, and 585 mentorship contacts.
- The referral network: 7 vehicle ambulances made functional, 16 tricycle ambulances, and 16,357 transport vouchers used.
- Health facility improvements: 9 facilities upgraded to Comprehensive Emergency Obstetric and Neonatal Care (CEmONC) capacity, 6 facilities upgraded to Basic Emergency Obstetric and Neonatal Care (BEmONC) capacity, essential equipment and supplies to 111 facilities, and 4 mother shelters renovated.
- Community engagement: trained 4,076 VHT members, carried out community maternal mortality surveillance, media campaigns, and used caller user groups.
- Supplies and equipment: improved percentage of facilities with no stock-outs of lifesaving medications, such as magnesium sulfate and oxytocin.



Key SMGL accomplishments

- Maternal mortality ratio (MMR) decreased by 30% among the population.
- Direct obstetric case fatality rate decreased by 25%.
- Cause-specific MMR from obstetric hemorrhage, postpartum sepsis, obstructed labor, and uterine rupture all decreased significantly.
- Delay-specific MMR from delays in seeking, accessing, and receiving care all decreased significantly.
- Met need for EmONC increased by 25%.
- Perinatal mortality rate decreased by 17%.
- Facility delivery rate increased by 62%.

Implications for programming

- District-wide, comprehensive approach is effective in addressing maternal and perinatal mortality.
- Efforts in both communities and facilities were vital to the success.
- Important to simultaneously address all 3 delays, (i.e., increase demand, increase access, and improve quality of care received).

Refer to executive summary (Appendix B) and indicators table (Appendix C) for details of the results.

2.4 SMGL External Evaluation Results

Dr. Stella Neema from Makerere University College of Humanities and Social Sciences presented end line results of the external evaluation of SMGL conducted by Columbia University. The evaluation followed a quasi-random design by using a mixed-method approach and assessed 4 broad aspects of the intervention:

1. Dose: How was it done?
2. Reach: How was it received?
    i. How well known was SMGL in target districts?
    ii. What SMGL interventions had greatest uptake?
3. Fidelity: Did it work as intended?
    i. Quality of care
    ii. Effects of health workers
4. Effects: What were the program effects?

Overall, Dr. Neema reported that the external evaluation confirmed that SMGL was successful in delivering a large portfolio of activities to increase demand and improve the quality of care at health facilities. In SMGL districts, providers reported higher satisfaction and appreciation for new equipment; women and local leaders credited SMGL with increasing the sense of urgency about maternal health. She concluded by highlighting the recommendations made by the external evaluators, as listed below:

- Commit to 5 years with a clear transition plan.
- Think of health system packages, not isolated interventions.
- Expand beyond training; consider other cost-effective models for improving quality of care.
- Focus on “last mile” (hard-to-reach) women.
- Clarify SMGL governance structure (globally and in host countries).
- Test future intervention packages by using rigorous evaluation methods.

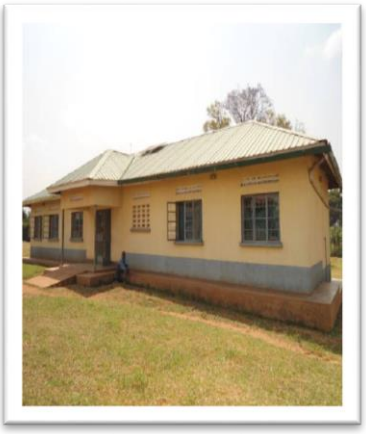
2.5 District Presentations

The District Health Officers of Kabarole, Kibaale, Kamwenge, and Kyenjojo made presentations highlighting the achievements, lessons learned, key challenges, and sustainability plans in their respective districts.

The issues presented cut across the four districts and are summarized as follows:

Achievements

1. Establishment of an active community VHT system—support was provided to 4,076 VHTs in the 4 districts who were key in the following:
    a. Community surveillance.
    b. Community mobilization and sensitization.
    c. Community referrals.
2. Improved access to and use of quality MNCH services by the following:
    a. Undertaking infrastructural improvements, including increasing operating theatre functionality and blood supply, thus making lifesaving interventions available.
    b. Recruitment of a critical cadre of health workers.
    c. Training and mentorship of health workers.
    d. Supply of essential medical equipment and supplies.
    e. Strengthening the Monitoring and Evaluation system at the district level.
    f. Strengthening the referral systems (ambulance and communication).
    g. Subsidizing transportation vouchers and building mothers shelters.
3. Improved coordination and partnerships



Key Challenges

1. Late referrals, which contributed to poor maternal outcomes.
2. Low male involvement and participation in MCH.
3. Insufficient focus on family planning services.
4. Ebola epidemic (Kibaale district), which interrupted delivery of several SMGL interventions.

5. Inadequate water supply in some health facilities.
6. Poor roads and difficult terrain (especially in Kibaale and Kamwenge districts).
7. Newborn service provision not a priority.
8. Managing and motivating the high number of VHTs.
9. Infrastructure challenges: continued need to support improvement of maternity, labor units in some of the lower level health facilities, (e.g., Kyarusozi HC IV).
10. During the SMGL Phase I transition period, the services affected included voucher services, critical staff, mobilization of mothers by VHTs, ambulance system, stock-out of mama kits, and motivation of critical staff (e.g., night allowance for theater officers and medical officers).

Lessons Learned

1. Functional health facilities and community mobilization improved MCH service use.
2. VHTs are key to community surveillance, community mobilization, and increasing community ownership.
3. Strong engagement and coordination of stakeholders in all program issues was vital for improved service delivery and program outcomes.
4. Strengthening the lower level facilities reduced congestion at higher level facilities.
5. Continuous mentorships improved the quality of service delivered.
6. Health worker motivation improved retention and service delivery.
7. Functional ambulance systems and functional referral facilities improved access to CEmONC services, saved maternal and neonatal lives, and served to support blood collection and distribution.
8. The comprehensive health systems strengthening approach of SMGL was effective.

Sustainability Plans

1. Involve local governments (sub-counties and town councils) in overseeing the welfare of the Village Health Teams (VHTs); Rwiimi sub-county is already planning a pilot study.
2. Districts will continue to support comprehensive clinic outreach (includes comprehensive community service provision—antenatal care [ANC], immunization, health education).
3. District local government has absorbed 2 ambulance drivers under district payroll.
4. District will maintain ambulances and E-ranger vehicles like other district vehicles.
5. District local government will maintain feeder roads.
6. Strengthen community ownership of referral system through sub-county or facility-based ambulance committees (to work with district ambulance committee).
7. Districts will continue conducting regular Technical Support Supervision visits.
8. As part of the efforts to increase theater staff, districts have seconded staff to train in anesthesia.

9. Districts will develop project proposals to solicit additional funding from other potential funders.
10. Formation of strong MNCH quality improvement teams at BEmONC facilities.
11. Continued involvement of political leadership in lobbying for possible budgetary support in improving staff accommodation at all BEmONC sites.

2.6 Phase II Priorities

Dr. Roxana De Sole Rogers, USAID's Acting Director HIV/AIDS, Health and Education, presented SMGL Phase 2 priorities. She informed the audience that the overall principle and strategy for Phase 2 are based on commitment, ownership, and sustainability. Dr. Rogers highlighted SMGL's overall goal of reducing maternal deaths by up to 50% in targeted districts and also listed the 3 SMGL objectives:

1. Develop models of quality maternal health services through district health strengthening to achieve maximum, sustainable impact.
2. Increase awareness and support among the American public with the goal of saving mothers' lives around the world.
3. Engage new public and private partners around the world to leverage expertise and coinvest in saving mothers.

She informed the audience that in addition to maintaining activities in the learning districts, SMGL is expanding to 6 districts in Northern Uganda in Phase 2: Nwoya, Gulu, Pader, Lira, Dokolo, and Apac.

2.7 Discussion Session Summary

The discussions centered on the need to clearly define the role of MoH and districts in leadership and ownership of SMGL in Phase 2 because Phase 2 is not a proof of concept, whereas Phase 1 of SMGL was. Similarly, the need for strong district coordination of implementation partners was a recurring issue. The Ministry of Health was also asked to review the package of services delivered at the HC II level, given that several HC IIs were offering delivery services (particularly in the Northern districts) even though this is not allowed by policy. The Ministry's response was that in select cases because of remoteness, the policy allows certain HC IIs to perform deliveries, and these are supported with the medical equipment and supplies needed for deliveries. Lastly, the contribution of VHTs in creating

demand for services was recognized, and several participants asked the government to find ways of motivating the VHTs.

Summary of FY15 District Plans on the Basis of Phase I Results

The development of SMGL Phase 2 district implementation plans was led by the District Health Officers (DHOs) of Kabarole, Kyenjojo, Kamwenge, and Kibaale. The planning process was guided and presented along 3 themes:

1. Interventions to be continued in Phase 2.
2. How to address Phase 1 challenges.
3. SMGL Phase 2 priorities.

3.1 Interventions to be continued in Phase 2

1. Maintain the functionality of all CEmONC facilities.
2. Mentorship and training of health workers.
3. Human resources enhancement and motivation.
4. Ambulance/referral system.
5. Service delivery and transport vouchers.
6. Maternal Death Surveillance and Response.
7. Supply of HMIS tools (partographs, mothers' passports, and VHT registers).
8. Infrastructure improvements by both the districts and implementing partners (health facility renovations, roads, water and power supply).
9. Demand creation through VHTs, leaders (community, religious, cultural), and radio programs.
10. Quarterly performance review meetings.
11. Strengthen monitoring and evaluation efforts and the interface with DHIS2.

3.2 How to address Phase 1 challenges

1. Integrate and increase use of family planning services into MCH clinics.
2. Ask the Ministry of Public Service to lift the wage bill ceiling to allow for recruitment of critical cadres of staff.
3. Train health workers on the revised HMIS tools.
4. Conduct Maternal and Perinatal Death Review support supervision and mentorship.

5. Strengthen neonatal care services: training health workers in neonatal care, creation of neonatal care units/corners, and supply of neonatal resuscitation kits.
6. Improve blood bank capacity and coordination network.
7. Emphasize male involvement.
8. Strengthen postnatal care services.
9. Refresher training of all 4,076 VHTs on Maternal Death Surveillance and Response and their roles and responsibilities.
10. Enhance demand for deliveries in facilities by using community dialogue at the parish level and radio talk shows.
11. Strengthen public-private partnership (private clinics offering ANC/maternity services).
12. Strengthen reporting, data analysis, and data use at all levels of service delivery.
13. Trainings of staff on latest guidelines and refresher trainings on existing guidelines.
14. Involve health inspectors and assistants in strengthening community-to-facility VHT linkages.
15. Routine maintenance of equipment.

3.3 SMGL Phase 2 priorities

District	Phase 2 Priorities
Kyenjojo	▪ Strengthen demand creation efforts by providing Mama kits and community mobilization for ANC/maternity services through VHTs. ▪ Strengthen neonatal care services by training health workers in neonatal care, creating neonatal care units/corners, and supplying neonatal resuscitation kits. ▪ Provide postpartum family planning services. ▪ Trainings and mentorship. ▪ Procure critical MNCH equipment. ▪ Provide data collection tools (partographs, registers, report templates). ▪ Strengthen maternal mortality surveillance.
Kabarole	▪ Provide postpartum family planning. ▪ Strengthen neonatal care services by training health workers in neonatal care, creating neonatal care units/corners, and supplying neonatal resuscitation kits. ▪ Construct ANC sheds. ▪ Establish new maternity sites (Nyabuswa, Kidubuli, SHIFA). ▪ Extend electricity to and refurbish the maternity and neonatal ward in Bukuku HC IV.
Kamwenge	▪ Orient 612 VHTs on maternal and newborn health. ▪ Maintain/fuel ambulances, and support monthly ambulance meetings. ▪ Establish a solar energy system for lighting so as to save electricity for sterilization. ▪ Top-up allowances to critical staff on the basis of performance.

	▪ Refurbish Rukunyu HC IV infrastructure. ▪ Construct accommodation near facilities for critical staff. ▪ Train records assistants. ▪ Mobilize for blood transfusion. ▪ Refurbish and equip neonatal intensive care unit at Rukunyu and Ntara. ▪ Recruit 27 Midwives, 2 Medical Officers, 2 Anesthetic Officers, 3 Laboratory Technicians.
Kibaale	▪ Conduct behavioral change communication by training health workers, radio programs, procuring IEC materials, research, community dialogue and coordination meetings, VHT training and engagements, and male involvement in MCH services. ▪ Introduce service and transport vouchers. ▪ Strengthen referral system through maintenance of ambulatory services, ambulance review meetings, strengthening usage of referral forms, comprehensive feedback, refresher trainings for drivers and riders, and maintenance of caller user group network. ▪ Conduct integrated community outreach, including health education, immunization, ANC and PNC, family planning, lab services, nutrition and growth monitoring, and breast and cervical cancer screenings. ▪ Scale up family planning services. ▪ Establish adolescent-friendly reproductive health services. ▪ Strengthen blood transfusion services. ▪ Strengthen newborn care services. ▪ Strengthen data management at the facility, community, health subdistrict, and district level.

3.4 Working Group Summary

In general, the four learning districts identified capacity building (training and mentorships), functional ambulance and referral system, voucher system, community mobilization, health facility infrastructural improvements, and provision of essential medical equipment and supplies as the keys to improved access and use of quality MCH services, and therefore, the improved maternal health outcomes observed under SMGL Phase 1. Besides stressing the need to maintain the interventions, the learning districts emphasized their intention to focus on neonatal health and postpartum family planning in SMGL Phase 2.

Further large group discussion emphasized the need for coordination between partners, and for defining roles and activities in Phase 2. Dr. Addy Kekitiinwa of Baylor Uganda recommended leaders use data for future planning. Dr. Florina Serbanescu of the Centers for Disease Control and Prevention said, “These results are impressive! I don’t know of any other country in the world, without vital registration, that has been able to report such a decline in maternal

mortality." Mr. Anthony Mugasa of the World Bank recognized SMGL's role as a catalyst to stimulate action.

Way Forward and Conclusion

The overall aim of the meeting was to disseminate SMGL Phase 1 results and launch Phase 2. In addition to dissemination of Phase 1 results, the meeting provided an opportunity for MoH to share the RMNCH Sharpened Plan, for other development partners to share their plans and activities to improve maternal and child health outcomes, and for districts to present the lessons learned from Phase 1. All presentations greatly informed and enriched the Phase 2 district implementation plan development process.

In their closing remarks, the district political leaders applauded the contribution of SMGL Phase 1 in improving health outcomes in their region, asked the district technical team to finalize Phase 2 implementation plans, called for district ownership of the SMGL program, and reiterated the districts' support and commitment to SMGL Phase 2. Ms. Luwaga Lillian, on behalf of the Ministry of Health, thanked the US government and implementing partners for funding the meeting and closed by emphasizing that the SMGL concept had been proven to work and should be embraced by all, going forward to Phase 2.

APPENDICES

Appendix A: Agenda

Time	Session	Responsible person
16th July 2014	**Day One**	
8.00 – 8.30	Arrival and Registration	Secretariat
8.30	**Opening**	**Dr. Dan Murokora**
8.30 – 9.00	Introductions; Meeting Objectives and Outputs	Dr. Dan Murokora
9.00 – 9.10	Remarks from Kabarole District Chairman	Kabarole District Chairman
9.10 – 9.20	Remarks from the SMGL IPs	Dr. Addy Kekitiinwa
9.20 – 9.30	Remarks from USG	Dr. Roxana De Sole Rogers
9.30 – 9.50	Remarks from Guest of Honor	Dr. Anthony K. Mbonye
	Session 1: Overview of Ministry of Health Plan	**Chair: Kabarole District Chairman**
9.50 – 10.20	Overview of MoH RMNCH Sharpened Plan and National Priorities	Dr. Jesca Nsungwa
10.20 – 10.35	Q&A	Session Chair
10.35 – 11.00	**Health Break**	
	Session 2: SMGL Phase I Results	**Chair: CAO Kabarole**
11.00 – 11.45	SMGL Endline Results	Dr. Frank Kaharuza
11.45 – 12.00	SMGL External Evaluation Results	Dr. Stella Neema
12.00 – 12.30	Q&A	Session Chair
12.30 – 13.30	District Presentations (Kabarole, Kamwenge, Kibaale, Kyenjojo)	DHO's
13.30 – 14.30	**Lunch**	**All**
14.30 – 15.00	Discussion: Lessons Learned from Phase I to inform Phase II	Session Chair – Kabarole CAO
15.00 – 15.20	Follow on Plans/Phase II Priorities	USAID
	Session 3: Planning for Phase II	**Chair: MoH – Dr. Anthony Mugasa**
15.20 – 15.50	Awards Ceremony	Director General Health Services
15.50 – 17.15	Group Work	DHO's chair their teams
17.15 – 17.30	Group Feedback – Plenary Session	MoH – Dr. Anthony Mugasa
17th July 2014	**Day Two**	
	Session 4: Continued Group Work in Districts	**Chair: CAO Kibaale**
8.30 – 10.30	Group Work Continued	DHO's
10.30 – 11.00	**Health Break**	
	Session 5: District Plans	**Chair: MoH – Dr. Lillian Luwaga**
11.00 – 12.20	Presentations of District Plans and Priorities for SMGL Phase II	DHO/Group Secretaries
12.20 – 12.50	Discussion	MoH – Dr. Lillian Luwaga
12.50 – 13.10	Official Closure	Kibaale District Chairman
13.10 – 14.00	**Lunch and Departure**	

Appendix B: Executive Summary of Phase I Results

Saving Mothers Giving Life (SMGL) is a 5-year initiative designed to rapidly reduce deaths related to pregnancy and childbirth. The initiative's emphasis is on promoting evidence-based approaches for saving lives during the most vulnerable period for mother and baby—labor, delivery, and the first 48 hours postpartum. It builds on existing health initiatives and seeks to further integrate maternal and newborn health services with HIV services and postpartum family planning. In just 1 year (SMGL's Phase 1), the maternal mortality ratio (MMR) in the 4 SMGL districts in Uganda fell by 30% from 452 per 100,000 live births in June 2012, to 316 per 100,000 live births in May 2013. The magnitude of this decrease is unprecedented in Africa and proves that an accelerated agenda to save mothers' and newborns' lives is possible, and raises hope toward reaching the maternal and child-related Millennium Development Goals.

Maternal deaths cannot be prevented by any one intervention alone. Reducing maternal mortality requires a solution that addresses multiple health system issues at all levels. Therefore, SMGL uses interventions that are designed to address three dangerous delays pregnant women face in childbirth: delays in deciding to seek care for an obstetric emergency, delays in reaching a health facility in time, and delays in receiving quality, appropriate care at health facilities. The first two relate directly to the issue of access to care, referring to factors in the family and the community, and the third relates to factors in the health facility, including quality of care.

Recognizing a problem and deciding to seek care

At the start of the project, data showed that a large proportion of the MMR (27%) was associated with delayed decision making at home. SMGL activities aimed to increase awareness of and demand for maternal and newborn health services through community-level outreach activities. A woman's chances of surviving pregnancy complications are greater if she is cared for in a hospital; thus, it is important that the woman and her family be aware of complications and know when to seek health care. Overall, the delay associated with recognizing a problem and seeking care decreased by almost half (46%) in the four SMGL-supported districts.

Data indicate that a shift in the location of death occurred during Phase 1, with fewer maternal deaths occurring in the home (declining from 35% to 27%) and more occurring in health facilities (increasing from 48% to 63%). These findings show that the SMGL interventions designed to promote deliveries in health facilities and to increase care for obstetric emergencies have been successful. The shift in the place of most maternal deaths (from community to facility), together with the falling MMR, are evidence that more women with severe complications are reaching hospitals.

To increase demand for deliveries in health facilities, the SMGL initiative

- Trained more than 4,000 Village Health Teams to encourage birth preparedness and increase demand for facility-based delivery care.
- Promoted community outreach activities to counsel women, families, local leaders, and community organizations about the importance of birth planning, recognition of danger signs of

pregnancy complications, attending at least 4 antenatal care visits, facility delivery care, HIV testing and treatment, postpartum homecare for mother/newborn, and postpartum family planning.
- Distributed Mama Kits to incentivize facility-based births.
- Disseminated community mobilization messages (radio, billboards, newspaper articles) and drama skits.

Accessing Quality Care

At the start of the SMGL initiative, 9% of maternal deaths were associated with women's reduced access to quality health services because of lack transportation or other physical barriers. Transportation is a complex issue, involving vehicles and drivers, fuel, road conditions, and sometimes transportation charges. Availability of motorized transport is critical for referring women with obstetric emergencies that require higher levels of service.

Marked increases in adequate transportation were seen for Health Centers III and higher levels of care. One possible explanation is the effect of "*boda-boda*" (motorcycle) transport vouchers, subsidized by SMGL, which contributed to important gains in access to all levels of care. *Boda-boda* subsidized transport freed up motorized transport controlled by facilities, and allowed better availability of ambulances for emergency referrals.

The proportion of deliveries that took place at any health facility increased by 62%—from 46% before Phase 1 to 74% after Phase 1. The proportion of all births delivered in EmONC facilities increased from 28% at baseline to 36% at the end of Phase 1. These increases suggest that enhancements in transportation, communication, and system functioning generally led to their improved ability to access care.

Paralleling the increase in institutional deliveries, the number of complicated deliveries treated in facilities increased substantially, which led to increases in the proportion of met need for obstetric care among women with direct obstetric complications. Overall, the proportion of expected complications treated in all facilities increased by 42% (from 46% to 66%); the proportion of expected complications treated in EmONC facilities increased by 25% (from 39% to 49%). This is an indication that the coverage and use of EmONC services have been improving.

During Phase 1, SMGL ensured that facility improvements match the increase in demand for quality services.

The proportion of facilities with uninterrupted electricity and water supplies and a sufficient number of beds increased significantly. Almost all delivering facilities (95%) provided delivery care 24 hours, 7 days per week at the end of Phase 1. The availability of EmONC facilities that provide all basic or comprehensive interventions rose by 150% (from 10 to 25 facilities). In addition, the proportion of midlevel facilities performing 4–5 EmONC interventions increased by 57% (from 28% to 44%). Current availability of lifesaving medications increased through improved management and supply chains. This also led to a substantial reduction in stock-outs of magnesium sulfate and oxytocin, essential

commodities for prevention and treatment of eclampsia and obstetric hemorrhage. The availability of the equipment necessary to provide lifesaving interventions increased. The percentage of facilities that had newborn ventilation equipment increased from 19% to 63%. The percentage that had functional autoclaves to sterilize delivery instruments increased from 18% to 44%. The numbers of obstetrician-gynecologists and registered midwives increased in the four SMGL districts in Uganda to meet the Ministry of Health's targets.

The increased number of facilities providing surgical care for obstetric complications translated into a higher proportion of births delivered by Cesarean Section (C-section). C-sections can prevent maternal and perinatal deaths and severe maternal health complications, such as obstetric fistula. The population-based C-section rate increased by 23%—from 5.3% at baseline to 6.5% at endline.

Receiving quality care in facilities

The timely recognition and management of complications during childbirth is important for complications to receive needed medical attention. At the start of the SMGL Initiative, 21% of maternal deaths followed a delay in receiving timely obstetric care after arriving at a health facility. The increase in the proportion of women with obstetric complications receiving emergency obstetric care and the decline in the case fatality rate of obstetric complications in facilities (from 2.6% at baseline to 2.0% at endline) suggest that the quality of the care the women in Uganda received improved substantially during SMGL Phase 1.

Quality of care improvements are documented by increased performance of several lifesaving interventions. The Active Management of the Third Stage of Labor (AMTSL), a critical intervention that can prevent postpartum hemorrhage, which should be a routine standard of care in facilities providing delivery care, doubled in CEmONC facilities, from 42% at baseline to 85% at endline.

By addressing the "3 Delays," the SMGL initiative had a substantial effect on the health and survival of women and infants in the four SMGL districts:

Decrease in overall maternal mortality

The significant decline in MMR in the SMGL-supported districts—from 452 deaths per 100,000 live births to 316 deaths, a drop of 30% in 1 year—was caused by significant changes in mortality attributed to obstetric hemorrhage (43% decline), obstructed labor/uterine rupture (54% decline, and sepsis (49% decline).

Most deaths were concentrated around the time of labor, delivery, and up to 24 hours after delivery (37%–38%) and during 24 hours to 42 days after delivery (49% at baseline and 42% at endline). The MMR during labor, delivery, and less than 24 hours postpartum fell by 28% from 168 to 121 per 100,000 live births. Similarly, during the 1–42 day period postpartum, the MMR fell by 40% from 222 to 135 per 100,000 live births, the sharpest decline. These declines are consistent with the SMGL model designed to reduce mortality and morbidity during labor and immediate postpartum. Better care during this critical period has lasting effects on reducing later postpartum deaths.

Obstetric hemorrhage was the leading cause of maternal death at both baseline and endline in Uganda. However, deaths caused by hemorrhage declined rapidly during Phase I of the SMGL initiative, suggesting that more women with complications received timely emergency obstetric care, and that the quality of care in these facilities improved.

Obstructed labor, including rupture of the uterus, a frequently fatal complication, was the second most common contributor to MMR, and the risk of dying from this cause showed the largest decline, from 72 to 30 deaths per 100,000 live births. Mortality caused by postpartum sepsis also declined significantly (48%), likely in part because of better management of obstructed labor.

Decrease in Maternal Mortality in Facilities

The maternal mortality ratio (MMR) in all facilities declined by 35%, from 534 maternal deaths per 100,000 live births at baseline to 345 per 100,000 at endline. The MMR in EmONC facilities declined by 24% (from 829 to 634 maternal deaths per 100,000).

Decrease in Perinatal Deaths in Facilities

The perinatal mortality rate (PMR) combines the number of stillbirths and early neonatal deaths and is an overall measure of the quality of antenatal and obstetric care. In Uganda, the PMR fell by 17%, from 39.3 perinatal deaths per 1,000 live births at baseline to 32.7 per 1,000 at endline.

Decrease in the Stillbirth Rate in Facilities

The total stillbirth rate declined by 20%, and the intrapartum stillbirth rate declined by 28% (from 22.4 intrapartum stillbirths per 1,000 live births to 16.0 per 1,000), which suggests improvements in the quality of delivery care in health facilities.

Appendix C

SMGL Districts in Uganda: Summary of Phase 1 Changes in SMGL Indicators

		Baseline[1]	Endline	% Change[2]	Sig. Level[3]
District-wide Maternal Mortality					
Maternal Mortality Ratio[4] (per 100,000 live births)		**452**	**316**	**-30%**	***
Cause-specific Maternal Mortality Ratio[5]	*Obstetric hemorrhage*	128	73	-43%	***
	Obstructed labor and uterine rupture	71	33	-54%	***
	Eclampsia/Pre-Eclampsia	58	45	-23%	NS
	Postpartum sepsis	33	17	-50%	**
	Complications of abortion	42	36	-15%	NS
	Other direct causes	49	31	-37%	*
	Indirect causes	70	82	17%	NS
Maternal and Perinatal Outcomes in Facilities					
Institutional Delivery Rate[8]	*All Facilities*	46%	74%	62%	***
	EmONC [9] Facilities	28%	36%	28%	***
% Institutional deliveries supported by transport vouchers (3 districts)[10]		6%	39%	550%	***
Active Management of Third Stage of Labor Rate (%) in Comprehensive EmONC Facilities		42%	85%	100%	***
Cesarean Sections as a Proportion of All Births (%)		5.3%	6.5%	23%	***
Met Need for EmONC[11] (%)	*All Facilities*	46%	66%	42%	***
	EmONC Facilities	39%	49%	25%	***
Direct Obstetric Case Fatality Rate[12] (%)	*All Facilities*	2.6%	2.0%	-25%	**
	EmONC Facilities	2.9%	2.4%	-18%	NS
Institutional Perinatal Mortality Rate[13] (per 1,000 births)		39.3	32.7	-17%	***
Institutional Stillbirth Rate[14] (per 1,000 births)		31.2	24.8	-20%	***
Pre-discharge Neonatal Mortality Rate[15] (per 1,000 live births)		8.4	8.1	-4%	***
HIV Prevention in Facilities					
Number of women who received prophylaxis or treatment		1262	1620	28%	
Number of infants born to HIV-positive pregnant women who received prophylaxis		1117	1415	27%	
Service Delivery					
Number of Basic EmONC facilities		3	9	200%	
Number of Comprehensive EmONC facilities		7	16	129%	
% of Lower-level health facilities with Partial Basic EmONC[16]		28%	44%	57%	

Power availability	58%	94%	62%	
Water availability	77%	94%	22%	
Delivery care available 24 hours/7 days a week (all facilities)	80%	95%	19%	
Number of Births				
District-Wide Births	75675	78261	3%	
Births in Facilities	33492	56571	69%	

[1] Baseline deaths occurred in the 12 months before Phase 1 (June 2011–May 2012); endline deaths occurred during Phase 1 (June 2012–May 2013). Baseline facility outcomes occurred during the 12 months before Phase 1 (June 2011–May 2012); endline facility outcomes occurred during Phase 1 (June 2012–May 2013). Baseline Health Facility Assessments were conducted in December 2011 (Zambia) and February 2012 (Uganda); endline Health Facility Assessments were conducted in June 2013.
[2] Percent change calculations based on unrounded numbers.
[3] Asterisks indicate significance level using the z-statistic as follows: ***p<.01, **p<.05, *p<.1, NS=Not significant.
[4] Ratio of maternal deaths to live births in the 4 districts. Includes direct and indirect obstetric deaths that occurred in communities and facilities, investigated in households with verbal autopsies, and with cause of death independently certified by physicians.
[5] Ratio of maternal deaths to live births in the 4 districts due to specific direct and indirect obstetric causes that occurred in communities and facilities.
[6] Ratio of maternal deaths in facilities among live births delivered at facilities.
[7] Ratio of maternal deaths to live births in the 4 districts due to specific direct and indirect obstetric causes that occurred in communities and facilities.
[8] Proportion of all births in population occurring in health care facilities.
[9] Emergency Obstetric and Newborn Care includes a set of 9 life-saving interventions, known as "signal functions" that the World Health Organization has recommended to reduce maternal and neonatal mortality. Basic Emergency Obstetric and Neonatal Care (BEmONC) facilities are those that performed at least 6 of 7 functions in the 3 preceding months (administer parenteral antibiotics, parenteral oxytocic drugs, parenteral anticonvulsants for pre-eclampsia and eclampsia; perform manual removal of placenta, removal of retained products, and assisted vaginal delivery). Comprehensive Emergency Obstetric and Neonatal Care (CEmONC) facilities are those that performed BEmONC signal functions and two additional functions: Cesarean sections and blood transfusions.
[10] Proportion of pregnant women who used transportation vouchers to access delivery care in SMGL facilities among all women who delivered in facilities in 3 of 4 SMGL districts.
[11] Proportion of women with major direct obstetric complications treated at all facilities/EmONC facilities among expected number of women who would have major obstetric complications (15% of expected births in the population).
[12] Proportion of women with major direct obstetric complications who die in all facilities/EmONC. Maternal deaths in facilities were crosschecked with maternal deaths identified in communities (RAMOS baseline and endline in Uganda).
[13] Proportion of institutional births that result in stillbirths or pre-discharge neonatal deaths (usually within the first 24 hours).
[14] Proportion of institutional births that are stillbirths among all facility-based births.
[15] Proportion of institutional births that result in pre-discharge neonatal deaths (usually within the first 24 hours after delivery)
[16] Percent of health centers (HC) that performed 4-5 basic emergency obstetric care interventions in the past 3 months.

Appendix D: Working Group Questions

WORKING GROUP OBJECTIVES

1. Develop a plan for how SMGL activities for Phase 2 complement your current District Plans.
    a. How to continue successful activities.
    b. How to improve on challenges.
    c. New activities.
        i. Priority Maternal Newborn Activities for next 1 year.

2. Provide a mapping of partners for the plan [Partner mapping Template].

Name of Project/ Partner	**Intervention Area**	**Duration of project**	**Coverage (Health Sub district)**	**Target group/ Estimated popn.**	**Implementation mode (tick all applicable)**			**Estimated annual budget**
					Direct Funding	**Technical Assistance**	**In kind**	

3. Start thinking about a long-term plan for SMGL activities for the next 4 years.
    a. Emphasize Sustainability Approach.
        i. Partners
        ii. Government

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